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Environmental Alert Service
1/2005

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EARTH DAY
April 22, 2005

U. S. Environmental Protection Agency. Earth Day 2005
http://www.epa.gov/earthday/
EPA and other government agencies participate in Earth Day activities and join with many diverse individuals and groups who are committed to protecting public health and the environment.

Earth Day History
http://www.epa.gov/earthday/history.htm
Includes a list of essays and other materials about the history of Earth Day.

Earth Day Poster 2005
http://www.epa.gov/earthday/earthday_poster_final.pdf

Poster del Día de la Tierra 2005 en Español
http://www.epa.gov/earthday/earthday_poster_final_espanol.pdf

U.S. Department of State. Office of International Programs. Earth Day 2005
http://usinfo.state.gov/gi/global_issues/environment/earth_day.html
Official site of the Office of the International Programs on Earth Day Issues.

PART I: GOVERNMENT DOCUMENTS

U.S. OCEAN ACTION PLAN. THE BUSH ADMINISTRATION'S RESPONSE TO THE U.S. OCEAN COMMISSION ON POLICY
Executive Office of the President, Council on Environmental Quality (CEQ). International Ocean Policy Group. December 17, 2004.

This Action Plan creates a cabinet-level Committee on Ocean Policy and calls for regional-level governance, planning and coordination on ocean issues. The plan comes in response to a report released by the U.S. Commission on Ocean Policy that included hundreds of recommendations and issued an urgent call to action to improve the health and management of marine areas.

[http://www.oceancommission.gov/documents/prepub_report/pre_pub_fin_report.pdf] Besides the creation of the Committee on Ocean Policy, the report sets out a number of other recommendations, including:
* Work with Regional Fisheries Councils to Promote Greater use of Market-based System for Fisheries Management.
* Build a Global Earth Observation Network, Including Integrated Ocean Observation.
* Develop an Ocean Research Priorities Plan and Implementation Strategy.
* Support Accession to the UN Convention on the Law of the Sea.
* Implement Coral Reef Local Action Strategies.
* Support a Regional Partnership in the Gulf of Mexico.
[Note: See also the President's Executive Order establishing the new Committee on Ocean Policy at: http://www.whitehouse.gov/news/releases/2004/12/20041217-5.html]
http://ocean.ceq.gov/actionplan.pdf [pdf format, 41 pages]

DESERTIFICATION: EARTH'S SILENT SCOURGE

Phyllis McIntosh.
State Department's Bureau of Oceans and International Environmental and Scientific Affairs and the Bureau of International Information Programs. Web posted September 13, 2004.

The word "desertification" may not be familiar to some readers; however, it goes to the core of global environmental concerns that increasingly preoccupy people on all continents of the globe. This book, published by the State Department's Bureau of Oceans and International Environmental and Scientific Affairs and the Bureau of International Information Programs, attempts to define, explain, and offer suggestions about how to deal with the insidious process of land degradation in agricultural and forest areas worldwide that is known as desertification. (…)This book, then, is a wake-up call for those in all nations of the world concerned about the future of the natural planet. The causes of desertification vary from place to place, and the solutions have been defined only in part. Continued attention to this problem is needed as increasing human population makes demands on land, water and crop resources and the food and habitat they provide.
http://usinfo.state.gov/products/pubs/desertific/ [html format, 7 files, various paging]

TSUNAMIS: MONITORING, DETECTION, AND EARLY WARNING SYSTEMS.

Wayne A. Morrissey.
CRS Report for Congress
Library of Congress. Congressional Research Service. January 24, 2005

Members of Congress have raised concerns about the adequacy of early warning for coastal areas of the western Atlantic Ocean. Those concerns stem from the December 26, 2004, tsunami that devastated many coastal areas around the northern Indian Ocean, where few tsunami early warning systems currently operate. Affected nations, assisted by others, are pursuing a multilateral effort to develop a detection and warning network for the Indian Ocean. Also, some Members of Congress and the Bush Administration have proposed a tsunami warning network for the U.S. Atlantic seaboard. Although instrumentation costs could run into the millions of dollars, existing weather buoys and state and local coastal and ocean observation networks might serve as possible platforms for the instrumentation. The European Union, Canada, and the United States may consider multilateral efforts to establish coverage for the North Atlantic.
http://www.fas.org/sgp/crs/RL32739.pdf [pdf format, 12 pages]

CLIMATE CHANGE LEGISLATION IN THE 108TH CONGRESS

Brent D. Yacobucci; Kyna Powers
CRS Report for Congress
Library of Congress. Congressional Research Service. Updated January 6, 2005

Climate change and greenhouse gas (GHG) emissions were an issue in the 108th Congress, as they were over the preceding decade. Bills directly addressing climate change issues ranged from those focused primarily on climate change research (H.R. 1578 and S. 1164) to comprehensive emissions cap and trading programs for all six greenhouse gases (S. 139 and H.R. 4067). Additional bills focused on GHG reporting and registries (H.R. 6 (Senate-passed), H.R. 1245, S. 17, and S. 194), or on power plant emissions of carbon dioxide (H.R. 2042, S. 139, S. 366, and S. 843). These climate change bills differed within and across categories. Among the climate change research bills, there were common and divergent research focuses. For example, a few bills, including S. 139 and S. 1164, would have directed research on historical instances of climate change to develop climate change models. Additional bills focused on research to examine vulnerabilities to climate change in the United States, particularly with respect to human health, environmental, and economic outcomes. Furthermore, some bills would have promoted research on political and technological options to reduce GHG emissions. This report briefly discusses basic concepts on which these bills were based, and compares major provisions of the bills in each of the following categories: climate change research, GHG reporting and registries, and cap and trade programs.
http://www.usembassycanada.gov/content/issues/climatechange_crs_108congress.pdf [pdf format, 19 pages]

ENVIRONMENTAL HEALTH RISKS TO YOUNG PEOPLE

Lynn R. Goldman
Growing Up Healthy : An Electronic Journal of the U.S. Department of State, January 2005

The body of environmental law and regulation is largely based in recognition of the link between human health and environmental conditions. Now science is learning that young, growing people may have greater vulnerabilities than adults to risks and toxins in the environment. A medical expert reviews several reasons why the young are more susceptible—and often more exposed—to air pollution, contaminants in food and water, tobacco smoke, and other hazardous substances.
http://usinfo.state.gov/journals/itgic/0105/ijge/goldman.htm [html format, 5 printed pages]

INTERNATIONAL SCIENCE TEAM MEASURES ARCTIC ATMOSPHERE

NASA – National Air and Space Administration, February 1, 2005

An international team of scientists has embarked on a journey to improve modeling of global-scale air quality and climate-change predictions by conducting high-quality measurements of the Arctic region's atmosphere. According to a January 27 NASA press release, the Polar Aura Validation Experiment (PAVE) will gather information to validate data from NASA's Aura satellite, launched in July 2004. PAVE takes place from January 24 to February 9. PAVE is the third in a series of planned Aura validation and science missions. The missions are expected to help researchers understand the transport and transformation of gases and aerosols in the lower atmosphere (troposphere), and their exchange with those in the lower stratosphere, the layer just above the troposphere. The troposphere starts at the Earth's surface and extends upward 8 to 14.5 kilometers. "The information from this campaign will aid in understanding how changing atmospheric composition, associated with climate change, might affect the recovery of the Earth's ozone layer," said Michael Kurylo, NASA program scientist for PAVE. PAVE partners include the University of Bremen in Germany, the National Center for Atmospheric Research in Colorado, the U.S. Naval Research Laboratory in Washington, the Koninklijk Netherlands Meteorological Institute and others.
More information about the Aura mission is available at http://aura.gsfc.nasa.gov/
More information about PAVE is available at http://cloud1.arc.nasa.gov/ave-polar
Text of NASA press release: http://www.nasa.gov/home/hqnews/2005/jan/HQ_05029_pave.html [html format, 1 printed page]

PART II: THINK TANKS AND INTERNATIONAL ORGANIZATIONS

IMPACTS OF A WARMING ARCTIC: ARCTIC CLIMATE IMPACT ASSESSMENT [ACIA]. ACIA OVERVIEW REPORT.
Arctic Council and Cambridge University Press. October 2004; Web-posted November 8, 2004.

[Note: The Arctic Council is forum for co-operation among national governments and indigenous peoples with particular interests in the Arctic region. Six international organizations representing many Arctic indigenous communities have the status of Permanent Participants of the Arctic Council and are involved in the work of the Council in full consultation with governments. The governments represented on the Council are: Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, the Russian Federation, Sweden and the United States.]
Concerned with environmental changes in the northern Polar Regions, the Arctic Council commissioned a four-year scientific study of the region conducted by an international team of 300 scientists. The assessment's findings and projections are laid out in this report and will be presented in detail at a scientific symposium in Reykjavik, Iceland, November 9-12, 2004. Among the sobering conclusions reached by the study team and noted in this report:
* The Arctic is warming much more rapidly than previously known, at nearly twice the rate of the rest of the globe, and increasing greenhouse gases from human activities are projected to make it warmer still.
* At least half of the summer sea ice in the Arctic is projected to melt by the end of this century, along with a significant portion of the Greenland Ice Sheet, as the region is projected to warm an additional 7 to 13°F (4-7°C) by 2100.
The report's projections are based on a moderate estimate of future emissions of carbon dioxide and other greenhouse gases, and incorporate results from five major global climate models used by the Intergovernmental Panel on Climate Change.
[Note: The report is rich with beautiful photos and other graphic materials. Unfortunately, these also increase the download time, so be aware that the full document may take some time to load. In order to reduce the download time, save the document to disk before viewing.]
http://amap.no/workdocs/index.cfm?dirsub=%2FACIA%2Foverview [pdf format, 146 pages]

NEXT STEPS IN CLIMATE CHANGE POLICY
Brookings Briefing
The Brookings Institution. February 9, 2005

A distinguished group of speakers discussed the Kyoto treaty and its entry into force, plus the current state of climate change policy. Senator Chuck Hagel and Senator John Kerry delivered remarks.
http://www.brook.edu/comm/events/20050209.htm [html and pdf format, several files]

MICHAEL CRICHTON AND GLOBAL WARMING
David B. Sandalow, Environment Scholar, Foreign Policy Studies
The Brookings Institution, January 28, 2005

How do people learn about global warming? That—more than the merits of any scientific argument—is the most interesting question posed by Michael Crichton's State of Fear. The plot of Crichton's 14th novel is notable mainly for its nuttiness—an MIT professor fights a well funded network of eco-terrorists trying to kill thousands by creating spectacular "natural" disasters. But Crichton uses his book as a vehicle for making two substantive arguments. In light of Crichton's high profile and ability to command media attention, these arguments deserve scrutiny.
http://www.brook.edu/views/op-ed/fellows/sandalow20050128.pdf [pdf format, 4 pages]

INCREASED SUPPORT FOR FOREST LANDSCAPE RESTORATION PROMISES MULTIPLE BENEFITS.
IUCN - The World Conservation Union. February 2005.

The start of the Forest Landscape Restoration Implementation Workshop in Petrópolis, Brazil, promises to mobilize political and financial support for multi-stakeholder reforestation across the globe. With an estimated 500 million people worldwide depending on forests for their livelihoods, people around the world are taking action to restore degraded forest lands. Forest managers, policy-makers, researchers, community organizations, banks and large companies are gathered this week in Petrópolis to contribute to a growing community of practice on Forest Landscape Restoration (FLR). “We no longer just plant trees. We are now in the business of giving something back, and putting in place a resource that will benefit generations to come,”
http://www.iucn.org/info_and_news/press/flr-brazil-04-2005.pdf [pdf format, 3 printed pages]

- **REVISION OF THE OPERATIONAL GUIDELINES OF THE WORLD HERITAGE CONVENTION COMPLETED AFTER FIVE YEARS OF WORK**

IUCN - The World Conservation Union. February 11 , 2005

A more complete and user-friendly set of Operational Guidelines for the implementation of the World Heritage Convention came into force on 2 February 2005. Over five years of debate and redrafting were required for the States Parties to agree on this key document. IUCN, official advisory body to the World Heritage Committee on natural heritage and co-drafter of the Convention itself, was deeply involved throughout the whole process of the revision to ensure that the credibility of the Convention was maintained. “World Heritage sites have become flagships for the commitment of our societies to cultural and natural heritage,” commented Achim Steiner, IUCN Director General, “By revising the Operational Guidelines the World Heritage Convention is able to reflect the evolving concepts and paradigms guiding future conservation efforts.”
Text of press release: http://www.iucn.org/info_and_news/press/operational-guidelines.pdf [pdf format, 1 page]
http://whc.unesco.org/archive/opguide05-en.pdf [pdf format, 161 pages]

- **TSUNAMI DECISION-MAKERS GUIDE URGES BUILDINGS AND BIODIVERSITY TO BE RESTORED TOGETHER**.

IUCN - The World Conservation Union. February 4 , 2005

IUCN has released a Decision-Makers Guide to help policy makers and project managers design and manage post-tsunami reconstruction, taking into account ecosystem rehabilitation that restores the livelihoods of survivors. Decisions are now being taken to quickly rebuild infrastructure and livelihoods in the affected countries. “Houses, schools, hospitals and hotels have all been damaged, along with fishing grounds, forests, beaches and other natural environments,” said Dr Bill Jackson, Director of the IUCN Global Programme. “All of these support the livelihoods of people in the affected areas, so the buildings and the ecosystems need to be restored at the same time for people to regain their daily income and standard of living”. The IUCN Decision-Makers Guide summarizes a large amount of technical information drawn from IUCN’s extensive global network of over 10,000 scientists and experts, as well as over 1,000 government, state agency and non-governmental organization members.
Text of press release: http://www.iucn.org/info_and_news/press/tsunami-decision-makers-guide.pdf [pdf format 2 pages]
http://www.iucn.org/tsunami/docs/tsunami-guidance-info.pdf [pdf format, 18 pages]

- **GLOBAL WARMING KEY FACTOR IN GROWING DROUGHT, SCIENTIST SAYS**

National Center for Atmospheric Research, University Corporation for Atmospheric Research, January 11, 2005

A new analysis by scientists at the National Center for Atmospheric Research (NCAR) in Colorado shows that the percentage of Earth's land area stricken by serious drought more than doubled from the 1970s to the early 2000s. According to a January 10 NCAR press release, widespread drying occurred

over much of Europe and Asia, Canada, western and southern Africa, and eastern Australia. Rising global temperatures seem to be a major factor, said NCAR's Aiguo Dai, lead author of the study. NCAR's primary sponsor, the National Science Foundation, funded the study. Dai and colleagues found that the percentage of global land experiencing very dry conditions rose from 10 to 15 percent in the early 1970s to about 30 percent by 2002. Almost half the change is due to rising temperatures rather than decreases in rainfall or snowfall, Dai said. "Global climate models predict increased drying over most land areas during their warm season, as carbon dioxide and other greenhouse gases increase," says Dai. "Our analyses suggest that this drying may have already begun."
http://www.ucar.edu/news/releases/2005/drought_research.shtml [html format, 2 printed pages]

GREENHOUSE GASES, NOT OCEAN CURRENTS, CREATED ANTARCTIC ICE

National Science Foundation. December 29, 2004

Scientists have challenged a longstanding theory that underlies the current understanding of climate change -- that the mile-thick ice sheet covering Antarctica developed because of a shift in ocean currents millions of years ago. According to a December 27 press release from Purdue University in Indiana, a series of deep-sea core samples taken from the ocean floor south of Australia indicates that the old theory -- that the circulation of warm ocean currents kept Antarctica largely ice-free during the Eocene Epoch prior to 35 million years ago -- needs reworking. Sampled sediments, deposited during the period when Australia and Antarctica were beginning to drift apart, show that cold-loving plankton were common in the waters then located to the east of the two then-adjacent continents. "These fossils indicate that a cold current, not the warm one that has been theorized, was flowing past the Antarctic coast for millions of years before the ice sheet developed," said Matthew Huber, lead author and assistant professor in Purdue's earth and atmospheric sciences department. "Because the ice sheet then appeared very rapidly, over a period of just a few thousand years, some other factor must have caused the rapid cooling that allowed it to form." Huber -- who performed the research with scientists from institutions in Sweden, Canada, the Netherlands, the United Kingdom and the United States -- said a more reasonable explanation for the change lies in atmospheric mechanisms, such as a buildup of carbon dioxide and the atmospheric feedback mechanisms it triggered. "It should give us pause that just such a buildup is what humans are bringing to the atmosphere today," he said. The work was supported in part by the U.S. National Science Foundation and the National Center for Atmospheric Research.
http://usinfo.state.gov/gi/Archive/2004/Dec/30-4584.html [html format, 5 pages]

THE COST OF U.S. FOREST-BASED CARBON SEQUESTRATION.

Robert N. Stavins and Kenneth R. Richards.
Pew Center on Global Climate Change. Web-posted January 19, 2005.

Cost-effective climate change policies should include storage of carbon dioxide (CO2) in U.S. forests, according to this report from the Pew Center on Global Climate Change. Most analyses of the climate issue have tended to focus on the implications of reducing emissions of carbon dioxide and other greenhouse gases from key industrial and transportation sources. Less attention is paid to the potential for storing (or “sequestering”) carbon in forests and other ecosystems. Both emissions reduction and carbon sequestration are important strategies for addressing climate change. Stavins and Richards investigate the potential for incorporating land-use changes into U.S. climate policy. They look at the true “opportunity costs” of using land for sequestration, in contrast with other productive uses. The report also examines the many factors that drive the economics of storing carbon in forests over long periods of time. A sequestration program on the scale envisioned by the authors would involve large expanses of land and significant up-front investment. As a result, implementation would require careful attention to program design and a phased approach over a number of years. The authors estimate that the cost of sequestering up to 500 million tons of carbon per year—an amount that would offset up to one-third of current annual U.S. carbon emissions—ranges from $30 to $90 per ton. On a per-ton basis, this is comparable to the cost estimated for other options for addressing climate change, including fuel switching and energy efficiency. The authors conclude that sequestration can and should play an important role in the United States’ response to climate change.
http://www.pewclimate.org/docUploads/Sequest%5FFinal%2Epdf [pdf format, 52 pages]

INTERNATIONAL CLIMATE EFFORTS BEYOND 2012: A SURVEY OF APPROACHES.
Daniel Bodansky, with contributions from Sophie Chou and Christie Jorge-Tresolini.
Pew Center on Global Climate Change. December 2004.

This report surveys and synthesizes more than 40 proposed approaches for strengthening international climate efforts beyond 2012. Some of the proposals included in the report build on the basic architecture of the Kyoto Protocol—for example, by extending the Clean Development Mechanism (CDM) or by outlining a pathway towards broader participation. Others depart by varying degrees from the existing architecture—for example, by articulating a different type of commitment (policies and measures rather than quantitative emissions targets); a different negotiating process (national pledges rather than internationally-negotiated commitments); or a different forum (a smaller group of countries rather than a global process). In addition to brief summaries of each proposal, the report provides an overview of key issues in the design and negotiation of future international efforts, and describes how the various proposals seek to address them. The issues include: the form and forum of negotiations; the time frame of a future agreement; the type and stringency of climate commitments; burden-sharing; and adaptation. The report also outlines criteria for assessing different options from a policy and a political perspective.
http://www.pewclimate.org/docUploads/2012%20new%2Epdf [pdf format, 70 pages]

CLIMATE DATA: INSIGHTS AND OBSERVATIONS.
Kevin Baumert and Jonathon Pershing, with contributions from Timothy Herzog and Matthew Markoff.
Pew Center on Global Climate Change. December 2004.

Baumert, Pershing, Herzog and Markoff of the World Resources Institute (WRI), draw policy-relevant observations from a comprehensive database of emissions, energy, economic and other data assembled by WRI and called the "Climate Analysis Indicators Tool". The report focuses largely on the 25 countries with the largest greenhouse gas (GHG) emissions. Among the authors' findings:
* A relatively small number of countries produce a large majority of global GHG emissions, and most also rank among the world's most populous countries and those with the largest economies. The group includes almost an equal number of developed and developing countries, as well as economies in transition.
* Per capita emissions and per capita income vary widely among the major emitters, a group that includes some the world's richest and poorest countries.
* The group of top emitters varies little whether counting only carbon dioxide (CO2) emissions from fossil fuel combustion, or CO2 from land use change as well, or other greenhouse gases; or whether looking at present, cumulative or projected emissions. The report also looks at variations in carbon intensity, vulnerability to adverse climate impacts, and capacity to address climate change.
http://www.pewclimate.org/docUploads/Climate%20Data%20new%2Epdf [pdf format, 50 pages]

OBSERVED IMPACTS OF GLOBAL CLIMATE CHANGE IN THE U.S.
Camille Parmesan and Hector Galbraith.
Pew Center on Global Climate Change. November 2004

This new report from the Pew Center on Global Climate Change reviews the broad range of ecological changes that have occurred in the United States in response to humanly induced changes in the global and U.S. climate. Numerous changes have already been observed and these changes have a range of implications for the United States, its ecosystems, and biodiversity. The responses of plants and animals to a changing climate are indicative of their natural ability to adapt, yet future global warming is likely to exceed the ability of many species to migrate or adjust. Furthermore, one species' success in coping with climate change may be another species' failure. The red fox, for example, is expanding into the range of the arctic fox, forcing the arctic fox into an ever-contracting area. Other observed changes include a long-term trend toward an earlier spring, with earlier flowering and reproduction of plant and bird species. Butterflies on the U.S. west coast are moving north and to higher altitudes in search of

tolerable climate conditions, with some populations disappearing altogether from the southern end of their ranges. And perhaps most alarming observation, according to the authors, is the rate at which the frozen Arctic tundra is thawing, releasing carbon dioxide to the atmosphere in a feedback loop that could ultimately accelerate global warming. The report also highlights actions that can be taken to better manage U.S. natural resources to minimize the effects of climate change.
http://www.pewclimate.org/docUploads/final%5FObsImpact%2Epdf [pdf format, 67 pages]

LIVING PLANET REPORT 2004.
WWF (World Wildlife Fund)

According to this WWF report, humanity is now consuming over 20% more natural resources than the Earth can produce, causing rapid declines in wild animal populations. The biggest consumers of nonrenewable natural resources are the United Arab Emirates, the United States, Kuwait, Australia and Sweden, who leave the biggest "ecological footprint. The authors contend that it is possible to exceed ecological limits for a while, but this “over-spending” of natural resources leads to the destruction of ecological assets, on which our economy depends. Examples of rapidly-depleting assets include depleted groundwater, collapsing fisheries, CO2 accumulation in the atmosphere, and deforestation. The report claims that overall, humanity's Ecological Footprint grew by 150% between 1961 and 2000. During the same time period, the report's Living Planet Index shows a 40% decline in terrestrial, freshwater, and marine species populations.
http://www.panda.org/downloads/general/lpr2004.pdf [pdf format, 44 pages]

PART III: ARTICLES

OVER A BARREL
Roberts, Paul
Mother Jones, Vol. 29, No. 6, November/December 2004: pp. 64-69

Petroleum experts are warning that oil will soon become too expensive and scarce to be dependable; the world oil markets are so tight that even a minor disturbance could send prices soaring. Yet, the author notes, the U.S. still relies on a decades-old energy policy that focuses on increasing supplies and does little to curb demand. High oil prices are beginning to bring more attention to alternative energy sources -- but Roberts notes that renewable energy accounts for only a tiny percentage of domestic U.S. energy production, and most alternative energy sources are "nowhere near ready for prime time." New automotive technologies such as hybrid cars are more fuel-efficient -- but will further postpone the time when alternative fuels such as hydrogen or biodiesel will displace their hydrocarbon rivals. While our current energy predicament may "unlock the political logjam" that has hampered development of alternative energy sources, Roberts writes that the U.S. has not mustered the political will for the massive public investment needed to switch to new sources of energy. He fears that we do not have enough time, and what the U.S. will do if it "finds itself in a real energy emergency." (AA)

A NEW VISION FOR NUCLEAR WASTE
Wald, Matthew L.
Technology Review Vol. 107, No. 10, December 2004, pp. 38-44

Highly radioactive spent fuel rods have been accumulating for decades at more than 100 nuclear power plants across the United States, and no permanent storage facilities for them are available. The federal Yucca Mountain underground storage facility in the state of Nevada, under development for two decades, has unresolved physical problems that may prevent it from ever providing permanent storage. Meanwhile, some reactor operators are moving spent rods from cooling water pools to aboveground concrete-and-steel casks for longer-term storage. The author suggests that cask storage will allow the

fuel to become easier to handle as it naturally decays and cools while new permanent storage methods are developed during the next 50-100 years. And, as an alternative to storing casts across the country, centralized storage in a rural area would increase security and reduce maintenance costs and risks to populated areas. Some utility industry members have selected a storage site, but the federal government remains committed to completing Yucca Mountain instead of developing alternative facilities.
http://www.technologyreview.com/articles/04/12/wald1204.asp [html format, 10 printed pages]

CONNECTING THE DOTS

Motavalli, Jim
E: The Environmental Magazine Vol. XV, No. 6, November-December 2004, pp. 26-37

The hantavirus outbreak in the U.S. in 1993 led scientists from the Center for Health and the Global Environment at Harvard University Medical School to investigate why the American Southwest seemed to harbor the virus. Citing a drought, which killed off the native deer mice predators, the deer mice population, which carry hantavirus, exploded, thus increasing the chance of human exposure. "In other words, the complex web of interlocking species, treasured by environmentalists but frequently disrupted by human activity, may be valuable for a whole new reason: its delicate balance protects our health." The article goes on to describe other ways in which biodiversity protects our health, including how diseases are moving from animals to humans. The fate of a species, such as the disappearance of the frog, may have less to do with habitat degradation than a sign of general environmental pollution. (PQ)

HOW DID HUMANS FIRST ALTER THE GLOBAL CLIMATE?

Scientific American, Vol. 292, No. 3, March 2005: pp. 46-53

Conventional wisdom has it that the start of the industrial era set global warming in motion. Ruddiman, marine geologist and professor emeritus of environmental sciences, University of Virginia, offers his provocative and controversial hypothesis that human-induced global warming began thousands of years earlier. He provides evidence that deforestation and development of agriculture began to increase carbon dioxide and methane (the "greenhouse gases") more than 8,000 years ago. The increased concentrations of these gases offset in part the decline expected from the natural cycle of gas concentrations recorded over millions of years, slowed earth's cooling, and delayed onset of the next ice age. He expects the rapid warming of the industrial era to continue until fossil fuels become scarce in about 200 years, but he states that it is impossible to predict whether the planet will remain warm enough to avoid another ice age. (AA)

THE IRONY OF CLIMATE

Paul Halweil
World Watch, Vol. 18, No. 2, March 2005: pp. 18-23.

While scientists debate on the pace and effects of global warming and climate change, the author notes that farmers around the world are already dealing with increasingly erratic weather, previously unknown pests, desertification, more severe storms and altered growing seasons. Halweil notes that most of the agricultural crops that humanity has bred over the millennia were intended to thrive in a stable climate. To deal with these unexpected climatic changes, farmers may have to diversify their crops to ensure a sufficient food supply and engage in long-term "carbon farming," such as planting trees, to absorb the built-up carbon dioxide in the atmosphere. Additionally, agriculture will have to become much more energy-efficient, and will very likely need to return to a more localized distribution system, as shipping goods over long distances becomes more expensive and precarious. (AA)

THE GREENING OF EVANGELICALS

Harden, Blaine
Washington Post, February 6, 2005

There is a growing awareness of environmental issues among conservative Christian evangelicals; while they are wary of established environmental organizations, increasing numbers of evangelicals regard stewardship of the environment as a duty mandated by the Bible. Last fall, leaders of the National Association of Evangelicals adopted a first-ever "Call to Civic Responsibility" for Christians to care for the environment and the role of the government in promoting sustainability. The Christian evangelical movement has been active in campaigns on global warming and reducing mercury poisoning, issues that may put them at odds with the Bush administration and Republican Congressional lawmakers. This is significant, notes the author, because Christian evangelicals are politically active; almost 80 percent of them voted for President Bush, constituting a third of the votes he received in 2004. Mainstream environmental organizations have begun trying to make common cause with the Christian right on environmental issues, after many years of mutual suspicion. (AA)